

What Is Claimed Is:

1. A method for surface treatment of a gold-plated body, wherein the surface of the gold-plated body is subjected to an annealing treatment at a temperature of 350 to 790°C so that a large number of sulfur-containing molecules can be immobilized thereon.

2. The method for surface treatment of a gold-plated body, according to claim 1, wherein the treatment is conducted so as to obtain a structure in which the surface gold crystals have no less than 30% planes with (1, 1, 1) orientation.

3. The method for surface treatment of a gold-plated body, according to claim 1 or claim 2, wherein said gold-plated body is an electroplated body obtained by immersing an electrically conductive substrate in a gold plating solution and passing an electric current through said electrically conductive substrate and said gold plating solution.

4. The method for surface treatment of a gold-plated body, according to claim 3, wherein a crystal growth enhancer is added to said gold plating solution.

5. The method for surface treatment of a gold-plated body, according to either claim 1 or claim 2, wherein said

sulfur-containing molecule comprises a nucleic acid residue, a protein residue, or a protein-bondable group.

6. The method for surface treatment of a gold-plated body, according to claim 1 or claim 2, wherein said sulfur-containing molecule is a probe for detecting a gene with an unconfirmed base sequence.

7. A surface-treated product of a gold-plated body obtained by conducting treatment by the surface treatment method according to claim 1 or claim 2.

8. The surface-treated product according to claim 7, wherein surface gold crystals have no less than 30% planes with (1, 1, 1) orientation.

9. A method for the immobilization of sulfur-containing molecules, wherein a large number of sulfur-containing molecules are immobilized on the surface-treated product of a gold-plated body obtained by conducting treatment by the surface treatment method according to claim 1 or claim 2.

10. A method for the manufacture of a gold-plated body that allows a large number of sulfur-containing molecules to be immobilized on the surface thereof, wherein surface gold

crystals are formed from a starting material comprising a crystal growth enhancer.

11. The method for the manufacture of a gold-plated body, according to claim 10, wherein the gold-plated body is obtained by adding a crystal growth enhancer to a gold plating solution, immersing an electrically conductive substrate therein, and passing an electric current through said electrically conductive substrate and said gold plating solution having the crystal growth enhancer added thereto.

12. The method for the manufacture of a gold-plated body, according to claim 10 or claim 11, wherein the formation of the surface gold crystals is conducted so as to obtain a structure in which the surface gold crystals have no less than 30% planes with (1, 1, 1) orientation.

13. The method for the manufacture of a gold-plated body, according to claim 10 or claim 11, wherein said sulfur-containing molecule comprises a nucleic acid residue, a protein residue, or a protein-bondable group.

14. The method for the manufacture of a gold-plated body, according to claim 10 or claim 11, wherein said sulfur-containing molecule is a probe for detecting a gene with an unconfirmed base sequence.

15. A gold-plated body obtained by the manufacturing method according to claim 10 or claim 11.

16. A gold-plated body according to claim 15, wherein the surface gold crystals have no less than 30% planes with (1, 1, 1) orientation.

17. A method for the immobilization of sulfur-containing molecules, wherein a large number of sulfur-containing molecules are immobilized on the gold-plated body obtained by the manufacturing method according to claim 10 or claim 11.